

16c) are superposed in the heated state, in that pressure is exerted on the superposed strips (16a, 16b, 16c) in order to achieve the adhesion of the laminated strips (16a, 16b, 16c), in order to obtain a laminated composite strip (17), and in that an operation involving mechanical stresses, such as a cutting operation, is carried out on the composite laminated strip (17).

10 11. The process as claimed in claim 9, characterized in that the reactive adhesive coating consists of one of the following polymer materials: acrylic material, polyester, epoxy resin, phenolic epoxy resin, polyester/epoxy resin, phenolic resin with modifier, polyurethane/polyester resin.

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12. The process as claimed in either of claims 10 and 11, characterized in that the reactive adhesive polymer material is deposited on at least one side of the thin metal strip (1) by one of the following processes: coating, spraying, dipping.

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13. The process as claimed in any one of claims 1 to 11, characterized in that thin brittle metal strip (1) is a strip made of a soft magnetic alloy having a nanocrystalline structure, that is to say containing at least 50 vol % of fine crystals having a size of less than 100 nm, obtained by casting the soft magnetic material in the form of an amorphous strip and by heat treatment of the amorphous strip, the thin metal strip (1) being covered, in one of its amorphous or nanocrystalline states, on at least one side with a coating layer comprising at least one polymer film.

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14. The process as claimed in claim 13, characterized in that the coating layer comprising a polymer

material has a thickness of between 1 and 50 μm .

15. The process as claimed in either of claims 13 and 14, characterized in that the thin strip of

5 nanocrystalline material has a thickness of around 20 μm .

16. The process as claimed in any one of claims 13, 14

10 and 15, characterized in that the soft magnetic material contains iron, copper, niobium, silicon and boron, or iron, zirconium, boron and possibly copper and silicon.

17. The process as claimed in claim 16, characterized

15 in that the atomic composition of the soft magnetic alloy is, for example, of the Fe-Cu-Nb-B-Si type or of the Fe-Zr-(Cu)-B-(Si) type or of another type.

20 18. The process as claimed in any one of claims 13 to

17, characterized in that the strip of soft magnetic material is covered in the amorphous state with a complex mixture consisting of solvents, polymer binders, aluminates, silicates and fluxes, in that the strip covered with the coating layer is dried, in that a plurality of coated and dried amorphous strips are produced, in that the plurality of coated amorphous strips are superposed, in that the coated amorphous strips undergo a first curing operation, in order to obtain an amorphous/polymer composite laminated strip, in that components are cut from the composite strip, in that the cut components are heat treated at a temperature allowing a

25 30 35 nanocrystalline structure to develop in the amorphous strips and allowing the aluminate/silicate/flux mixture to vitrify, in order to obtain cut shaped components comprising

laminated nanocrystalline layers and vitrified layers.

19. The process as claimed in claim 18, characterized
5 in that a resin of the ethylcellulose type,
solvents consisting of a mixture of aliphatic or
aromatic hydrocarbons, a mineral filler consisting
of glasses or oxides, and an organic filler
10 consisting of organometallic or surfactant
substances are used in the mixture for covering
the strip (1).

20. The process as claimed in any one of claims 1 to
15 19, characterized in that that step in which the
thin strip (1) is subjected to stresses is a
mechanical cutting operation.

21. The process as claimed in any one of claims 1 to
20 19, employing a step of chemically cutting a thin
metal strip (30) coated on one of its sides with a
coating layer (31) made of polymer material.

22. The process as claimed in claim 1 for the
25 production of a component (44) of a printed
circuit, comprising at least one winding (42, 43),
such as a transformer (44), characterized in that:

- a laminated strip (36) consisting of a strip
(36a) made of nanocrystalline alloy and of a film
of polymer material (36b) adhering to one of the
30 sides of the strip of nanocrystalline alloy is
produced;

- the strip made of nanocrystalline alloy is cut
in order to obtain a plurality of magnetic
circuits (37) made of nanocrystalline alloy each
35 adhering to one section of the film of polymer
material (36b);

- a plurality of sections are cut from the film of
polymer material;